

What is claimed is:

1. A method of identifying a type of a disc, comprising:
detecting an RPM (Rotation Per Minute) of the disc; and
identifying a first disc type by comparing the RPM with a first reference value.
2. The method of claim 1, wherein the identifying of the first disc type includes determining whether the disc is a DVD(-) type or a DVD(+) type.
3. The method of claim 1, wherein the identifying of the first disc type includes determining that the disc is a DVD(-) type if the RPM is lower than the first reference value and that the disc is a DVD(+) type if the RPM is not lower than the first reference value.
4. The method of claim 1, further comprising:
measuring reflectivity of the disc; and
identifying a second disc type between a one-time recordable type and a re-recordable type by comparing the reflectivity of the disc with a second reference value.
5. The method of claim 4, wherein the identifying of the second disc type includes determining that the disc is the one-time recordable disc type if the reflectivity is higher than the second reference value and that the disc is the re-recordable disc type if the reflectivity is not higher than the second reference value.
6. The method of claim 3, further comprising:
measuring reflectivity of the disc; and
identifying a second disc type either as a one-time recordable disc type or as a re-recordable disc type by comparing the reflectivity of the disc with a second reference value.
7. The method of claim 1, wherein the detection of the RPM is performed after converting a motor control mode rotating the disc into a CLV (Constant Linear Velocity) servo mode based on a wobble signal.

8. An apparatus identifying a type of a disc, comprising:
a motor rotating the disc; and
a system controller identifying the type of the disc by comparing an RPM of the disc detected using a frequency signal generated at the motor with a first reference value.
9. The apparatus of claim 8, wherein the system controller determines that the disc is a DVD(-) type if the RPM is lower than the first reference value and that the disc is a DVD(+) type if the RPM is not lower than the first reference value.
10. The apparatus of claim 8, further comprising a pickup which emits light on the disc and receives the light reflected by the disc, wherein the system controller determines whether the disc is a one-time recordable disc type or a re-recordable disc type according to the reflectivity measured on the basis of light received via the pickup.
11. The apparatus of claim 10, wherein the system controller determines that the disc is a one-time recordable disc if the reflectivity is higher than a second reference value and that the disc is a re-recordable disc if the reflectivity is not higher than the second reference value.
12. The apparatus of claim 9, further comprising a pickup which emits light on the disc and receives light reflected by the disc, wherein the system controller determines whether the disc is a one-time recordable disc type or a re-recordable disc type according to the reflectivity measured on the basis of light received via the pickup.
13. A method of identifying a disc format, comprising:
measuring a reflectivity of light from a disc to identify the disc format as a one-time re-recordable type if the reflectivity is higher than a reflectivity reference value and as a re-recordable type if the reflectivity is less than the reflectivity reference value; and

measuring an RPM of the disc to identify the disc format as a DVD(-) type disc if the RPM is lower than a speed reference value or as a DVD(+) type if the RPM is higher than the speed reference value.

14. The method of claim 13, further comprising:
converting a motor control mode rotating the disc into a CLV (Constant Linear Velocity) servo mode based on a wobble signal to control the RPM of the disc.

15. The method of claim 13, wherein the measuring the RPM comprises using a frequency signal generated by a motor that rotates the disc.

16. A method of identifying a disc type, comprising:
receiving reflected light reflected from a disc, wherein the disc is identified as a one-time recordable type or as a re-recordable type based on the amount of the reflected light received.

17. A method of identifying a disc type, comprising:
comparing a reflectivity of light from a disc to a reflectivity reference value;
identifying the disc type as a one-time re-recordable type if the reflectivity is higher than the reflectivity reference value and as a re-recordable type if the reflectivity is less than the reflectivity reference value;
comparing an RPM of the disc to a speed reference value; and
identifying the disc format as a DVD(-) type disc if the RPM is lower than the speed reference value or as a DVD(+) type if the RPM is higher than the speed reference value.

18. The method of claim 17, further comprising:
setting the reflectivity reference value to identify the disc as a DVD-R or a DVD+R type if the reflectivity is between 45% and 80% and as a DVD-RW or DVD+RW type if the reflectivity is between 18% and 30%.

19. The method of claim 17, further comprising:

setting the speed reference value to identify the disc as a DVD(-) type if the disc rotates at 2600 RPM in a stabilized wobble CLV 1X mode and as a DVD(+) type if the disc rotates at a velocity exceeding 2600 RPM.

20. The method of claim 17, further comprising:

setting a control mode of a spindle motor to a stable wobble CLV servo mode if the disc is identified as a DVD(-) type to control the RPM of the disc.

21. The method of claim 20, further comprising:

returning a spindle motor to a control mode using FG signals before reaching a maximum RPM of the disc drive in order to protect performance of the spindle motor if the disc is identified as a DVD(+) type.

22. The method of claim 21, wherein the returning comprises returning to the control mode when the detected RPM is 4000 to 5000 rpm.

23. An apparatus that identifies a disc type, comprising:

an RF (radio frequency) amplifier that produces a push-pull signal from light received from a disc;

a wobble detector that filters a wobble signal from the push-pull signal; and

a system controller that identifies the disc type from the wobble signal.

24. The apparatus of claim 23, further comprising:

a pickup that receives reflected light from the disc.

25. The apparatus of claim 24, wherein the pickup comprises:

an objective lens;

an actuator to drive the objective lens;

a laser diode; and

an optical detector.

26. The apparatus of claim 25, further comprising:
a servo controller that drives the actuator and thus moves the objective lens up and down to detect the reflected light.
27. The apparatus of claim 23, further comprising:
a spindle motor that rotates the disc based on FG signals.
28. The apparatus of claim 23, wherein the wobble detector comprises:
a bandpass filter having a filtering coefficient at a frequency of 145 KHz.
29. A method of identifying a type of a disc, comprising:
comparing a disc reflectivity with a first reference value; and
identifying the disc as a DVD(R) type if the reflectivity is higher than the first reference value and as a DVD(RW) if the reflectivity is lower than the first reference value.
30. The method of claim 29, further comprising:
generating FG signals from a spindle motor; and
measuring an RPM of the disc using the FG signals.
31. The method of claim 30, further comprising:
comparing a measured RPM with a second reference value; and
identifying the disc as a DVD(-) type if the RPM is lower than the second reference value and as a DVD(+) type if the RPM is higher than the second reference value.
32. A method of identifying a disc format during an initial disc driving period, comprising:
measuring a disc reflectivity to identify the disc format as either a DVD-R/+R or a DVD-RW/+RW; and
measuring a disc RPM to identify the disc format as either a DVD(-) or a DVD(+).